PC Project:

Spread The Wealth

Share Your Broadband Internet Connection

In many households, one computer is not enough. While the kids are doing homework on one PC, Mom is sending email on the Mac and Dad is researching vacation spots using the notebook.

Basic PCs are so cheap that it isn't absurd for every member of the family to have a computer of his or her own. Once each of them does, though, they'll all want to be online at once.

No problem. There are many ways to let several computers in one house share a broadband Internet connection. With a shared connection, two or more PCs can be online at the same time, with no more arguing about whose turn it is to surf the Web or use instant messaging. There are, in fact, several options for sharing an Internet connection. The one that's right for you will depend on your budget, the location of the PCs in your house, and other factors.

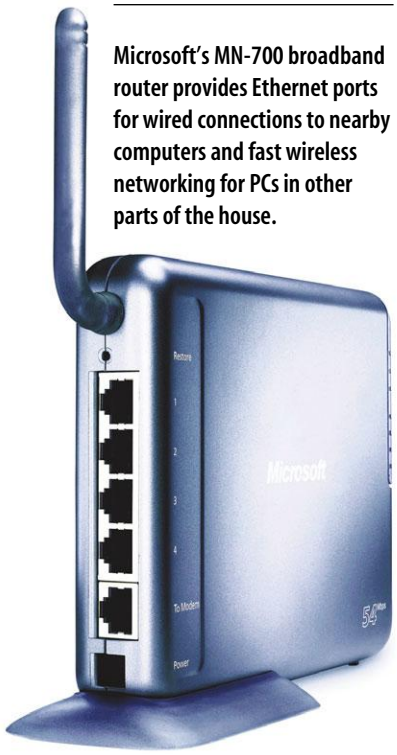
All of these configurations assume you have a broadband Internet connection, that is, a DSL (Digital Subscriber Line) or cable modem or some other connection that's faster than a standard modem. (There are ways to share a modem connection amongst two or more PCs, but they'll have you tearing your hair out. An analog modem just doesn't have the bandwidth to satisfy more than one person at once.)

Go Wired

A wired router is an inexpensive way to share an Internet connection. This is a great option if all of your computers are in the same room or you're able to run wires from a central location (where the cable modem and router are located) to each of the computers. This may require drilling holes in walls, so a wired network can be a bad choice for apartment dwellers and other renters.

The heart of a wired network is the **router**, a piece of hardware that connects to the DSL or cable modem and to each computer that will be online. The router allows every connected computer to share that single Internet connection. Wired routers are not expensive. Two options are the D-Link DI-604 Broadband Router ($49.99) and Linksys BEFSR41 (about $49.99).

When you're choosing a wired router, pay attention to the number of ports it has. The number of ports is



Microsoft's MN-700 broadband router provides Ethernet ports for wired connections to nearby computers and fast wireless networking for PCs in other parts of the house.

With a shared connection, two or more PCs can be online at the same time, with no more arguing about whose turn it is to surf the Web or use instant messaging.

the maximum number of computers that can share the Internet connection. Many home routers, including the two mentioned earlier, can connect up to four PCs. If you need more, look for a router with eight or more ports. No matter how many ports you start with, there's room to grow. When the triplets are old enough for their own PCs, you can connect an inexpensive Ethernet hub to add another bunch of ports.

Each computer will need an Ethernet jack, which is standard equipment on virtually all modern computers. If yours doesn't have one, you can add a PCI (Peripheral Component Interconnect) Ethernet card for about $15. You'll also need standard Category 5 Ethernet cables, long enough to reach from the router to each computer in your network.

Once the router is connected to the cable modem and each PC, you need to configure it. Router configuration is usually blissfully simple, done either with a special setup utility or a Web-based setup program.

Network Setup Wizard
Completing the Network Setup Wizard
You have successfully set up this computer for home or small office networking.
For help with home or small office networking, see the following topics in Help and Support Center:
Using the Shared Documents folder
Sharing files and folders
To see other computers on your network, click Start, and then click My Network Places.
To close this wizard, click Finish.
< Back
Finish
Cancel

Need to share an Internet connection without a router? Use Windows' Internet Connection Sharing Wizard. As long as the main computer is turned on, other computers can use its Internet connection.

An inexpensive Ethernet hub combined with Windows Internet Connection Sharing tool will let many computers share an Internet connection.

Go Wireless

The popularity of wireless networking is exploding. Most home users setting up a new network do it wirelessly. It may not be as cheap as a wired network, but it can be more versatile.

Like a wired network, a wireless network is built around a router that is wired to your cable or DSL modem. But instead of Ethernet cables running from the router to every PC, they communicate by radio. That means no drilling holes to run cables between rooms, no irritating the landlord, and more flexibility in where you locate computers. If you have a notebook, it can access the Internet from the couch or the kitchen.

Wireless routers cost a bit more than wired. Two excellent choices are Microsoft's MN-700 Wireless Base Station (about $60) and Linksys' WRT54G (about $90). Many wireless routers, including these two, have Ethernet ports to connect PCs in the same room.

Every computer that is not within a wire's reach will need a wireless access card, a small radio transceiver that connects to the computer's PC Card slot, PCI slot, Ethernet port, or USB (Universal Serial Bus) port. These generally cost $30 to $60 per computer.

A wireless network provides flexibility in locating computers but not complete freedom. A wireless access point can typically talk to computers in a 200- to 300-foot radius—up to a few rooms away. As you move farther from the access point, the connection becomes slower. Walls and other obstructions, especially concrete and steel beams, further limit wireless range.

Go Wizard

Windows 98 and later have a built-in Internet Connection Sharing tool. It lets one PC share its Internet connection (a broadband connection or even a modem connection) with other PCs. With Internet connection sharing, you won't need a router, but the other PCs won't be able to access the Internet unless the main PC, the one that's sharing its connection, is turned on.

Internet Connection Sharing eliminates the need for a router, but you'll still have to connect the computers into a network. For sharing a modem connection between two computers, a simple, cheap Ethernet cable will do the job. If you have more than two computers, you can use an inexpensive Ethernet hub to connect them together. Internet connection sharing will even work if you have wireless access cards in each PC but no wireless router.

Here's how to set up connection sharing in Windows XP. Be sure to configure connection sharing on the computer that is directly connected to the Internet. From the Control Panel, click Network And Internet Connections (make sure you're in Category View) and then Set Up Or Change Your Home Or Small Office Network. This will open the Network Setup Wizard. Walk through the wizard's steps. It will ask you to identify your Internet connection and name your network.

When the wizard finishes, the computer is working as a router to share its Internet connection. In the last step, the wizard will show options for running the Network Setup Wizard on the other computers in the network. Run the Network Setup Wizard on each of the PCs on the network. They will look to the main PC for a Internet connection.

Share & Share Alike

Sharing a broadband Internet connection is an easy way to make your PCs more useful and keep Internet connection costs down. Connection sharing isn't limited to computers, either: You can just as easily get your Xbox or PlayStation 2 connected for online games and your TiVo connected for its home media functions.

PCs in any of these networks (wired, wireless, or using Windows' built-in tool) can share more than the Internet connection. With some easy setup, they can share files, printers, and other peripherals, too. ❚❚

BY KEVIN SAVETZ